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Design of a Water-Powered Hydraulic Car Jack

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A Technical Report

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ABSTRACT

This report describes the design, fabrication and test of a water-powered hydraulic car jack. The water jack is designed to lift and support 2500 pounds with 40 psi minimum water pressure. The maximum designed pressure is 65 psi. At this pressure the jack will raise to maximum extension in ten seconds. An orifice will be used to control the flow.

The water jack prototype was made with iron and steel and weighs approximately 50 pounds. To make the jack more feasible, it will have to be made with lighter materials such as aluminum or plastic.

The water jack is fully operational and has good potential for future development. It has been tested at 70 psi and shows no signs of failure.

The water jack would be a great asset for the average "do-it-yourself" auto mechanic.